

DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name; I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled "METHODS AND APPARATUS FOR DETERMINING THE STATE OF A VARIABLE RESISTIVE LAYER IN A MATERIAL STACK" the specification of which (check one): ☒ is attached hereto; ☐ was filed on _____ as Application Serial No. _____ and was amended on _____ (if applicable); ☐ was filed as PCT International Application No. _____ on _____ and was amended under Article 19 on _____ (if applicable). I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above. I acknowledge the duty to disclose to the Patent and Trademark Office all information known to me to be material to patentability as defined in 37 C.F.R. §1.56.

I hereby claim foreign priority benefits under 35 U.S.C. §119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

Priority Claimed

_____ (Application Serial Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
_____ (Application Serial Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/> Yes	<input type="checkbox"/> No

I hereby claim the benefit under 35 U.S.C. §119(e) of any United States provisional application(s) listed below:

_____ (Application Serial Number)	_____ (Day/Month/Year Filed)
_____ (Application Serial Number)	_____ (Day/Month/Year Filed)

I hereby claim the benefit under 35 U.S.C. §120 of any United States application(s) or PCT international application(s) designating the United States of America listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior application(s) in the manner provided by the first paragraph of 35 U.S.C. §112, I acknowledge the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 C.F.R. §1.56 which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application:

_____ (Application Serial Number)	_____ (Day/Month/Year Filed)	_____ (Status-Patented, Pending or Abandoned)
_____ (Application Serial Number)	_____ (Day/Month/Year Filed)	_____ (Status-Patented, Pending or Abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: I hereby appoint as my patent attorneys and patent agents, with full powers of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

John B. Lungmus(18,566)	Thomas I. Ross (29,275)	Roger A. Heppermann	Bryan J. Lempia (39,746)
Allen H. Gerstein (22,218)	Kevin D. Hogg (31,839)	(37,641)	David C. Read (39,811)
Nate F. Scarpelli (22,320)	Jeffrey S. Sharp (31,879)	David A. Gass (38,153)	Thomas A. Miller (40,091)
Michael F. Borun (25,447)	Martin J. Hirsch (32,237)	Gregory C. Mayer (38,238)	William K. Merkel (40,725)
Carl E. Moore, Jr. (26,487)	Richard M. La Barge (32,254)	Michael R. Weiner (38,359)	Scott E. Baxendale (41,605)
Richard H. Anderson (26,526)	James J. Napoli (32,361)	Joseph A. Williams, Jr.	Brent E. Matthias (41,974)
Patrick D. Ertel (26,877)	Robert M. Gerstein (34,824)	(38,659)	Sandip H. Patel (43,848)
Richard B. Hoffman(26,910)	Michael R. Hull (35,902)	Paul C. Craane (38,851)	Kevin M. Flowers (44,684)
James P. Zeller (28,491)	Anthony G. Sitko (36,278)		Randall G. Rueth (45,887)
			William J. Kramer (46,229)

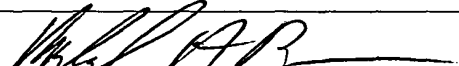
of MARSHALL GERSTEIN & BORUN, with offices located at 233 South Wacker Drive, 6300 Sears Tower, Chicago, Illinois 60606-6357, telephone (312) 474-6300; and

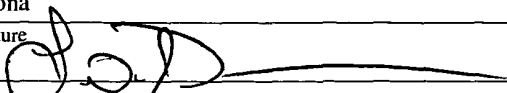
Alan K. Aldous (31,905)	Christopher Gagne (36,142)	Paul Nagy (37,896)	Steven P. Skabrat (36,279)
Shireen I. Bacon (40,494)	Sharmini N. Green (41,410)	Dennis A. Nicholls (42,036)	Howard A. Skaist (36,008)
R. Edward Brake (37,784) Ben	Robert Greenberg (44,133)	Lanny Parker (44,281) Michael	Paul E. Steiner (41,326)
Burge (42,372)	Bradley Greenwald (34,341)	D. Plimier (43,004)	Joni D. Stutman-Horn (42,173)
Robert Chang (48, 765)	Jeffrey B. Huter (41,086)	Michael Proksch (43,021)	David Tran (50,804)
George Chen (50,807)	Seth Z. Kalson (40,670)	Kevin A. Reif (36,381)	Robert G. Winkle (37,474)
Glen B. Choi (43,546)	Peter Lam (44,855)	Crystal D. Sayles (44,318)	Sharon Wong (37,760)
Kenneth Cool (40,570)	Issac Lin (50,672)	Kenneth M. Seddon (43,105)	Steven D. Yates (42,242)
Jeffrey S. Draeger (41,000)	David C. Lundmark (42,815)	Mark Seeley (32,299)	Calvin E. Wells (43,256)
Cynthia Thomas Faatz	Anthony Martinez (44,223)	Ami P. Shah (42,143)	Michael Willardson (50,856)
(39,973)	Larry Mennemeier (51,003)	David Simon (32,756)	Charles K. Young (39,435)

of INTEL CORPORATION, with offices located at 2200 Mission College Blvd., Santa Clara, CA 95052, telephone (408)765-8080.

Send correspondence to: Randall G. Rueth

FIRM NAME	PHONE NO.	STREET	CITY & STATE	ZIP CODE
Marshall, Gerstein & Borun	312-474-6300	6300 Sears Tower 233 South Wacker Drive	Chicago, Illinois	60606-6357

Full Name of First or Sole Inventor Michael A. Brown	Citizenship United States
Residence Address - Street 16013 S. 36 th Street	Post Office Address - Street 16013 S. 36 th Street
City (Zip) Phoenix (85048-7323)	City (Zip) Phoenix (85048-7323)
State or Country Arizona	State or Country Arizona
Date <input checked="" type="checkbox"/> 25 July 2003	Signature <input checked="" type="checkbox"/> 

Second Joint Inventor Luke A. Johnson	Citizenship United States
Residence Address - Street 908 W. Apollo Avenue	Post Office Address - Street 908 W. Apollo Avenue
City (Zip) Tempe (85283)	City (Zip) Tempe (85283)
State or Country Arizona	State or Country Arizona
Date <input checked="" type="checkbox"/> 25 July 2003	Signature <input checked="" type="checkbox"/> 

APPLICABLE RULES AND STATUTES

37 CFR 1.56. DUTY OF DISCLOSURE - INFORMATION MATERIAL TO PATENTABILITY (Applicable Portion)

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentability defines, to make sure that any material information contained therein is disclosed to the Office.

Information relating to the following factual situations enumerated in 35 USC 102 and 103 may be considered material under 37 CFR 1.56(a).

35 U.S.C. 102. CONDITIONS FOR PATENTABILITY: NOVELTY AND LOSS OF RIGHT TO PATENT

A person shall be entitled to a patent unless --

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or
- (c) he has abandoned the invention, or
- (d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraph (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent, or
- (f) he did not himself invent the subject matter sought to be patented, or
- (g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

35 U.S.C. 103. CONDITIONS FOR PATENTABILITY; NON-OBVIOUS SUBJECT MATTER (Applicable Portion)

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

35 U.S.C. 112. SPECIFICATION (Applicable Portion)

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.